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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,889	01/07/2004	Parl C. Hummel	7784-000975	8147

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EXAMINER	
KARDOS, NEIL R	
ART UNIT	**PAPER NUMBER**
3623	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/753,889	HUMMEL, PARL C.	
	Examiner	Art Unit	
	Neil R. Kardos	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is a **NON-FINAL** Office action on the merits in response to communications filed on January 7, 2004. Currently, claims 1-29 are pending.

Specification

2. The abstract of the disclosure is objected to because it is not written in proper narrative form. The language of the abstract and claim 1 are identical. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 3, 7-9, 17-19, and 22-29 are objected to because of the following informalities:

Claim 3: Claim 3 recites "wherein the step of identifying a plurality of potential customers comprises identifying a plurality of different types of helicopters." It is not clear how a helicopter is a customer. The application refers to customers' ability to purchase a potential product ("affordability"). Furthermore, the plain meaning of a customer is a person with the ability to purchase. Helicopters do not have such an ability. Clarification is required

Claims 7, 17, 22, 25, and 28: Claims 7, 17, 22, 25, and 28 recite "determining, for each one of at least a plurality...." Examiner believes there is a typographical error in this recitation. Specifically, Examiner is not sure what is meant by "at least a plurality." This phrase is

redundant. A plurality refers to two or more items. "At least a plurality" would also refer to two or more items. Examiner requests that Applicant clarify this confusing limitation.

Claims 8-9, 18-19, 23-24, and 26-29: Dependent claims 23-24 and 26-29 are objected to for failing to remedy the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 13, 22, and 25: Claims 1, 13, 22, and 25 are directed toward the statutory category of a process. In order for a claimed process to be patentable subject matter under 35 U.S.C. § 101, it must either: (1) be tied to another statutory class (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *See Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the method/process is not patentable subject matter under § 101. Thus, to qualify as a statutory process under § 101, the claim should positively recite the other statutory class to which it is tied (e.g. by identifying the apparatus that accomplishes the method steps), or positively recite the subject matter that is being transformed (e.g. by identifying the material that is being changed to a different state).

Here, the claimed invention does not transform underlying subject matter to a different state or thing because it merely develops certain products based upon their probability of success. Furthermore, the claimed process is not tied to another statutory category, such as a particular apparatus. The claimed method steps of identifying, determining, deciding, and developing are capable of being carried out entirely in the human mind. Thus, the claimed process is not tied to another statutory category and is unpatentable under § 101.

Claims 2-12, 14-21, 23-24, and 26-29: Dependent claims 2-12, 14-21, 23-24, and 26-29 are rejected for failing to remedy the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jamieson, "Adjusting Stated Intention Measures to Predict Trial Purchas of New Products: A Comparison of Models and Methods," in view of Thompson (US 7,216,087), and further in view of Kauffmann, "Using Simulation with a Logit Choice Model to Assess the Commercial Feasibility of an Advanced Environmental Technology."

Claim 1: Jamieson discloses a method comprising:

- identifying a plurality of potential products (see page 340: table 1, disclosing a plurality of products);
- identifying a plurality of potential customers (see page 340: table 1, disclosing respondents to surveys as potential customers);

Jamieson does not explicitly disclose determining the probability of all possible implementation combinations in which at least n of the potential customers implement each of the potential products, where n is a positive whole number. Rather, Jamieson discloses determining the probability that each potential customer will purchase each product (see page 340: table 1, disclosing the percentage of respondents who will buy the product; page 337: section "Alternative Models" and equation 1). Thompson teaches a probability matrix that shows the probability of every possible combination related to a customer purchase decision (see figure 6b; see also figures 6a and 6c; col 16: ln. 55 through col. 17: ln. 34).

Jamieson and Thompson are both related to customer purchase decisions. Jamieson teaches determining the probability that a potential customer will purchase a potential product. Thompson teaches determining a purchase probability for every possible combination of potential customer choices. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Thompson's theory of determining every possible potential purchase combination with Jamieson's teaching of customer purchase probabilities to arrive at a determination of the probability of every possible purchase scenario for different customers related to a potential product. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained by determining the probability of

product success, and the increased accuracy in determining the probability of success (see Thompson: page 16: col. 35-37 and col. 55-57).

Jamieson also does not explicitly disclose deciding which of the potential products to develop based on the probability determinations, and then developing those products. However, the disclosure of Jamieson is directed to methods for predicting purchases of new products (see title). Kauffmann teaches another method for predicting purchases of new products that can be used in the product development decision process to determine which products to develop (see abstract; page 1513: col. 2: ¶ 3 through page 1514: col. 1: ¶ 1; page 1514: col. 2: section 3: ¶ 1).

Jamieson and Kauffman are both directed to determining customer purchase probabilities. It is assumed that purchase probabilities obtained by performing Jamieson's methods will be used to develop products that are predicted to be the most successful. However, Jamieson does not explicitly disclose this; Kauffmann does. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Jamieson's purchase probabilities to develop the products with the highest potential for success as taught by Kauffmann. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies and profits gained by developing products with the highest potential for success.

Claim 2: Jamieson discloses wherein the step of identifying a plurality of potential products comprises identifying a plurality of potential software products or potential hardware products (see table 1, disclosing "home computer," "cordless phone," "shower radio," etc.).

Furthermore, using the disclosed method for a particular type of product (e.g. software or hardware) is a recitation of intended use. A recitation of the intended use of the claimed

invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The method of Jamieson is capable of being used to determine the purchase probability of any type of product; thus, Jamieson meets the language of the claim.

Claim 3: The cited references do not explicitly disclose wherein the step of identifying a plurality of potential customers comprises identifying a plurality different types of helicopters.

However, using the disclosed method for a particular type of customer (e.g. helicopters) is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The method of Jamieson is capable of being used to determine the purchase probability of any type of customer; thus, Jamieson meets the language of the claim.

Claim 4: Jamieson discloses combining, for each potential product, the probabilities of the implementation combinations for the potential product such that each potential product has a corresponding probability combination (see at least equation 1 on pages 337-338).

Jamieson does not explicitly disclose ranking the probability combinations. Examiner takes Official Notice that it was well-known in the arts at the time the invention was made to use rankings in the decision-making process. Thus, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to rank the purchase probabilities of Jamieson. The motivation for doing so would be to increase efficiencies in the product development decision-making process.

Claim 5: Jamieson does not explicitly disclose using threshold probability combination values to determine which products to develop. Examiner takes Official Notice that it was well-known in the arts at the time the invention was made to use thresholds in the decision-making process. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to develop products in which Jamieson's purchase probability meets or exceeds a certain threshold. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained in the product development decision-making process.

Claim 6: Jamieson discloses adding together the probabilities of the implementation combinations for the potential product (see equation 1 on page 337-338, disclosing a summation of the customer purchase probabilities).

Claim 7: Jamieson discloses determining, for each one of at least a plurality of the potential products and for each one of at least a plurality of the potential customers, the probability of the potential customer implementing the potential product (see "Alternative Models" in column 2 of page 337; equation 1).

Claim 8: Jamieson does not explicitly disclose requirability probabilities, affordability probabilities, and availability probabilities. However, Jamieson does disclose an affordability adjustment factor, the affordability adjustment factor based on a potential customer's willingness to pay for the potential product (see at least table 7). Jamieson also discloses an availability adjustment factor based on the potential product's availability to the potential customer (see at least tables 4 and 7). Jamieson also teaches a "liking" adjustment factor, which is different from but related to a requirability adjustment factor (see at least table 4).

Jamieson teaches supplying customers with surveys allowing for scaled responses to questions regarding affordability, availability, and liking (see Appendix on page 344). Jamieson teaches using responses to these surveys to determine an affordability, availability, and liking adjustment factor rather than a probability. However, Examiner takes Official Notice that it was well-known in the arts at the time the invention was made to determine probabilities from survey responses. For example, Jamieson uses a similar scaled response to determine purchase probability (see table on page 337).

While the liking factor of Jamieson is not identical to the claimed requirability factor, the two are similar. Examiner takes Official Notice that it was well-known in the arts at the time the invention was made to determine customer requirements during the product development stage (e.g. the Quality Function Deployment methodology). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a requirability factor in the methodology of Jamieson. One of ordinary skill in the art would have been motivated to do so for the benefit of increased accuracies in determining customer purchase probability.

Claim 9: Jamieson does not explicitly disclose multiplying together the requirability probability, the affordability probability, and the availability probability to determine the probability of the potential customer implementing the potential product. However, does teach equations that multiply adjustment factors to arrive at a purchase probability (see e.g. equations 2 and 3). Examiner takes Official Notice that it was well-known in the arts at the time the invention was made to multiply separate probabilities to arrive at an overall probability (e.g. the probability that two independent events A and B will both occur is P(A) multiplied by P(B)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to multiply probabilities (requirability, affordability, and availability) to arrive at the overall probability determination of Jamieson. One of ordinary skill in the art would have been motivated to do so for the benefit of a more accurate purchase probability.

Claim 10: Claim 10 is substantially similar to claim 7 and is rejected under similar rationale.

Claim 11: Claim 11 is substantially similar to claim 8 and is rejected under similar rationale.

Claim 12: Jamieson does not explicitly disclose wherein the potential products are potential software products

However, using the disclosed method for a particular type of product (e.g. software) is a recitation of intended use. A recitation of the intended use of the claimed invention must result

in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The method of Jamieson is capable of being used to determine the purchase probability of any type of product; thus, Jamieson meets the language of the claim.

Claims 13, 22, and 25: Claims 13, 22, and 25 are substantially similar to claim 1 and are rejected under similar rationale.

Claims 14-21: Claims 14-21 are substantially similar to claims 4-11 and are rejected under similar rationale.

Claims 23-24 and 26-27: Claims 23-24 and 26-27 are substantially similar to claims 8-9 and are rejected under similar rationale.

Claims 28-29: Claims 28-29 are substantially similar to claims 7-8 and are rejected under similar rationale.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Quatse (US 2005/0010472), directed to targeting customers by usage statistics, including using a probability matrix
- Bliss (US 2004/0230464), directed to designing IT products, including requirements, rankings, and thresholds
- Bemmaor, Albert C. "Predicting Behavior from Intention-to-Buy Measures: The Parametric Case." *Journal of Marketing Research*. Volume 32, Issue 2. May 1995. pp. 176-191.
- Levin, Nissan, et al. "AMOS – A probability-driven, customer-oriented decision support system for target marketing of solo mailings." *European Journal of Operational Research*. Volume 87. 1995. pp. 708-721.
- Bernstein, Jerry, and David Macias. "Engineering New-Product Success: The New-Product Pricing Process at Emerson." *Industrial Marketing Management*. Volume 31. 2002. pp. 51-64.
- Thomas, Ronald Eugene. "An Intelligent Decision Support System for New Product Development." (PhD dissertation, Arizona State University, May 1995).
- Ozer, Muammer. "Pre-Production Market Assessment of Innovative Consumer Products." (PhD dissertation, University of Pittsburgh, 1996).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil R. Kardos
Examiner
Art Unit 3623

NRK
9/18/08
/Jonathan G. Sterrett/
Primary Examiner, Art Unit 3623